

JOURNAL
OF THE
ASIATIC SOCIETY.

Part II.—PHYSICAL SCIENCE.

No. IV.—1873.

DESCRIPTIONS OF NEW SPECIES OF UNIONIDÆ.—By W. THEOBALD, Esq

[Received July 29th, 1873; read August 6th, 1873.]

(With plate XVII.)

UNIO BHAMOENSIS, n. s., Pl. XVII, Fig. 1.

Testá subtriangulato-ovatá, postice acuminatá, margine centrali modice rotundato, umbonibus tumidiusculis, lævigatis, pustulis parvis aliquando armatis, decorticatis. Epidermide tenuissimá, lævi, subpolitá, læte viridi, in senioribus flavescente. Testá concentrice subrugatá, lineis paucis sive rugis angustis ligamentum versus plus minusve subradiatim notatá, et antice rugis paucis perbreuibibus leviter corrugatá. Dentibus cardinalibus lamellatis, et denticulatis, in valvâ dextrâ singulo, multifisso, in sinistrâ gemino, posteriore triangulari et umbonem juxta posito, anteriore lamelliformi, striato. Nacréá argenteá et iridescente.

Hab. prope Bhamo, regno Birmanico; necnon in Prome occidentali Provinciâ Pegu.

Lat. 52, alt. 40, crass. 26 mm.

A rare species in Western Prome where alone I have met with it in Pegu, and remarkable for its smooth thin epidermis. The posterior slope alone is conspicuously ornamented with sculpture, but in my largest specimen from Bhamo and in some others also, the peculiar sculpturing of *U. burmanus*, W. Blfd. is faintly but distinctly perceptible over part of the valves towards the umbones especially. A small specimen of 36 mm. from Western Prome exhibits distinctly also the two rows of spines which characterise the next species, so that it seems that *U. burmanus*, *U. bhamoensis*

and *U. mandelayensis* constitute a natural little sub-group of osculant species at once distinct, but connected and sufficiently distinguishable from any of the ordinary Indian types. I have not, however, felt justified in separating them from the great Indian "*corrugatus*" group in my forthcoming catalogue of Indian shells.

UNIO MANDELAYENSIS, n. s., Pl. XVII, Fig. 2.

Testá cuneate subtriangulari, margine ligamentali recto, ventrali, rotundato; valde inæquilaterali: antice lævi, umbones versus leviter corrugatá; postice ab umbonibus usque ad angulam posteriorem fortiter plicato-corrugatá. Epidermide lævi, tenui, subpolitá, glaucá sive viridi-flavá, lineis plurimis radiantibus obscure pictá. Umbonibus decorticatis, granulosis, lineis duobus pallidis 5-6 muricate spinigeris, ornatis. Lineis ad marginem tendentibus, spinis vero vix ad medium valvæ attingentibus. Dentibus sicut in precedente.

Hab. prope Mandelay, regno Birmanico.

Lat. 53, alt. 40, crass. 31 mm.

In only one specimen have I seen the muricate spines descend below the centre of the valves, but the pale linear bands whereon they stand usually descend to the margin.

The peculiar sculpturing of *U. burmanus* is also seen in this species though less strongly marked and though sometimes carried over a good portion of the valves, yet is usually most pronounced on the posterior slope.

UNIO FEDDENI, n. s., Pl. XV., Fig. 3.

Testá quadrato-ovali, concentrice sulcatá, antice gibbose rotundatá, postice dilatatá, subtruncatá; parum inæquilaterali. Umbonibus decorticatis, haud prominentibus. Epidermide lævi, subpolitá, viridescenti-flavá. Dentibus cardinalibus lamelliformibus, striatis; in valvâ dextrâ singulo, serrato, in sinistrâ geminis triangularibus, striatis et serratis. Nacréâ cærulescenti-albidá.

Hab. in Peemunga fluvio, Indiæ centralis. Teste F. Fedden.

Lat. 40, alt. 29.5, crass. 19 mm.

This very peculiar and marked form which somewhat recalls by its outline the American *U. securis*, seems a rare species and was collected sparingly among numbers of fine specimens of *U. wyngungensis*, Lea, in Central India by my colleague Mr. Fedden after whom I have named it. It falls naturally within the great "*corrugatus*" group, though there are few better marked varieties than it.

UNIO GOWHATTENSIS, n. s., Pl. XVII, Fig. 4.

Testá quadrato-ovatá, antice rotundatá, postice declive truncatá, margine ventrali recto. Umbonibus decorticatis. Epidermide flavescente, postice

viridescente. Testá concentricè striatá et rugis plurimis minutis valde approximantibus angulariter seu fulgurate granuloso-crispatá, postice tantum radiatim granuloso-crispatá. Dentibus cardinalibus bifidis in utrâque valvâ. Nacréâ cærulescenti-albidâ, iridescente. In senioribus granulationes valde inconspicuæ fiunt.

*Hab. prope Gowhatti in Assam.**

Lat. 39, alt. 25·5, crass. 18 mm.

The only other *Unio* that I am acquainted with possessing the peculiar fulgurate and granulose sculpture of this species is *U. crispisulcatus*, B., and to that group it must be referred, for greatly as the two species at first sight would seem to differ I have little doubt that intermediate forms connecting them will eventually be discovered. Fig. 4a represents the sculpture enlarged and fig. 4b that of *U. crispisulcatus*, B. for comparison.

MONOCONDYLÆA AVÆ, n. s., Pl. XVII, Fig. 5.

*Testá oblongá, solidiusculá, antice rotundatá, postice curvatim truncatá. Margine ventrali recto; ligamentali convexo. Umbonibus decorticatis. Epidermide picéâ, in junioribus luteo-flavescente lineis tenuibus obscure radiatim notatá. Testá incrementi lineis concentricè rugatá, postice plicis paucis raro notatá et valde evanescentibus. Dentibus minimis ut in *M. salweniana*. Nacréâ cærulescente, umbones versus flavescente.*

Hab. prope Mandalay regno Birmanico.

Lat. 96, alt. 52, crass. 28 mm.

This species differs considerably from the ordinary forms of *M. salweniana* by its great smoothness and its elongated form. It resembles in the former respect the Philippine *M. Cumingi*, Lea, and young specimens sometimes exhibit a trace of faint sculpturing along the posterior slope much as in *M. inoscularis*, Gould, but all the adults I have seen have been quite devoid of sculpture.

SPHERIUM AVANUM, n. s., Pl. XVII, Fig. 6.

Testá quadrate rotundá, tumidá, antice rotundatá, postice truncatá, dilatá, equilaterali. Epidermide, leviter et concentricè corrugatá, postice levissime radiatá. Umbonibus prominentibus, tumidis, osculantibus; colore pallide stramineo, tribus fasciis purpureis umbonalibus radiatim picto. Ligamento umbones versus inflato.

Hab. prope Ava.

Lat 7·5, alt. 6·6, crass. 5·2 mm.

A single specimen of this rotund or pisiform species occurred among a number of specimens of *Corbicula* and other fresh-water shells received from Ava.

* Obtained by one of the collectors of the Indian Museum.—[Ed.]